Kirkby-in-Ashfield

Urban District Council.

Annual Report

FOR 1900,

BY

John Mackenzie,

MEDICAL OFFICER OF HEALTH.

KIRKBY-IN-ASHFIELD :

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Kirkby-in-Ashfield

Urban District Council.

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JOHN MERCER, Esq., J.P.

Vice-Chairman :

GEO. HY. HUNT, Esq.

Councillors :

EAST WARD:

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JOHN MERCER
WM. DAVISON

WEST WARD:

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ED. HAYES
GEO. HY. HUNT
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SOUTH WARD:

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Sanitary Inspector :

JOHN TODD GELSTHORPE.

Surveyor :

W. DODSLEY.

Collector of General & District Rates :

WM. UNWIN.

REPORT.

To the Chairman and Members of the Urban District Council of Kirkby-in-Ashfield.

GENTLEMEN:—

I beg to submit to you my annual report on the sanitary condition of your district.

Area.

It has an area of 5590 acres, mostly arable land. The chief industry is coal-mining.

Physical features and general character of the District.

Topographically the parish is divided from East to West by a deep valley—Erewash Valley—which drains into its bed the surface and spring water from the higher areas along its northern and southern sides, thus giving rise to the Erewash river, here, at its origin, a mere rivulet. The soil forming the lower part of the slopes and base of the valley is a soft, porous, loam, the subsoil heavy clay, largely used in brickmaking. Deeper still we find the magnesian limestone bed. To the east, towards Sherwood Forest, the subsoil is sandy and gravelly over strata of red sandstone and marl.

Wards.

East Kirkby, which comprises the East Ward, is situated on a gentle slope, embracing in part the out crop of red sandstone which dips east and part of magnesian limestone bed. The surface level drains itself down into the valley with a south-western view. Kirkby Town and Park comprising the West Ward, situated partly on level fields and partly on steep slopes or hillsides, form the western boundary of the valley with a southern aspect.

Annesley Woodhouse, Nuncargate, Mutton Hill, Kirkby Woodhouse, Todd's Row, and Portland Row comprising the South Ward are hamlets; all extending their boundaries, except Portland Row and Todd's Row, and joining into one continuous whole.

Mutton Hill, Nuncargate, and Kirkby Woodhouse are built on more or less steep hill sides with a northern aspect, forming the southern boundary of the Erewash Valley. Annesley Woodhouse, the largest of these villages, is situated on tableland with a dip to the south.

Population.

The estimated population up to the middle of 1901 is 9,410, that is assuming that the same ratio of increase during the census period 1881-91 still holds good. The decennial census for 1891-01 will soon be available when it will be found, I think, that the actual population of this parish will probably be 11,000. This opinion is based on the following facts:—On the 1st April, 1891, the number of inhabited houses was 1,257, and the population 6,533, equivalent to 5·19 per house. The number of inhabited houses last Michaelmas term was: East Ward, 741; West Ward, 645; South Ward, 722; total, 2,108 x 5·19 ; 10,940·52, or neglecting the two decimal figures 10,940. In considering the population two other factors must be borne in mind, (a) owing to the prosperity of the coal industry large numbers of the strictly rural population migrated into such mining centres as ours, where they command better wages ; (b) the price of building material and the high rate of wages so depressed the building trade that compared with previous years fewer houses were erected, e.g., 1899, 118 new houses, whereas in 1900 only 75. The result has been overcrowding, many houses having two families, especially newly married couples.

Scarcity of houses.

This state of matters is very difficult to deal with, as people cannot be turned into the streets. Unless in a short time the great demand for houses produces a corresponding supply we shall have a condition of things requiring the Council's urgent attention.

Vital Statistics.

Copies of Tables i. ii. iii. and iv. prepared for the Local Government Board and County Council will be found at the end of the report.

Births.

401 births were registered during the year, equivalent to an annual birth-rate of 42·6 per 1000 of the population, occurring quarterly, as follows:—

	Males.	Females.
1st Quarter	52	46
2nd „	50	55
3rd „	44	53
4th „	56	45
Totals 1900	202	199
Totals 1899	219	193
Totals 1898	199	155
Totals 1897	190	208

The following table shows the Births in each Ward :—

Births occurring Quarterly in Wards.

	East Ward	West Ward	South Ward
1st Quarter	42	23	33
2nd „	45	30	30
3rd „	46	26	25
4th „	48	28	25
Totals 1900 ...	181	107	113
Totals 1899 ...	180	108	124
Totals 1898 ...	157	91	106
Totals 1897 ...	178	79	141

Birth Rate for last five years :

Comparative Birth Rate

1896	41·5 per 1000	
1897	46·40	„
1898	40·18	„
1899	45·4	„
1900	42·6	„

A decrease on 1899 of 2·8.

Death Rate

190 Deaths were registered, equivalent to an annual mortality of 20·1 per one thousand of the population, occurring quarterly in Wards as follows :

Deaths occurring Quarterly in each Ward,

	East Ward	West Ward	South Ward
1st Quarter	28	28	10
2nd „	16	10	11
3rd „	21	13	5
4th „	23	15	10
Totals 1900 ...	88	66	36
Totals 1899 ...	58	56	45
Totals 1898 ...	56	35	49
Totals 1897 ...	58	24	47

Comparative Death-Rate.

Death-Rate for the last 5 years:

1896	19·6 per 1000
1897	15·04 „
1898	15·8 „
1899	17·5 „
1900	20·1 „

An increase of 2·6

Infant Mortality.

82 deaths were registered under 1 year of age, equivalent to an annual mortality of 204·4 per 1000 births; 431·5 per 1000 total deaths; 8·7 per 1000 total population living; and occurring quarterly in Wards as follows:—

Occurring Quarterly in Wards.

	East Ward		West Ward		South Ward	
	Under 1 year	1 and under 5 years	Under 1 year	1 and under 5 years	Under 1 year	1 and under 5 years
1st Quarter	14	1	11	3	3	2
2nd „	5	3	2	3	3	3
3rd „	11	—	4	2	3	—
4th „	14	3	6	—	6	1
Totals 1900 ...	44	7	23	8	15	6
Totals 1899 ...	23	12	21	10	14	10
Totals 1898 ...	29	7	8	5	17	12
Totals 1897 ...	21	13	7	2	28	4
Totals 1896 ...	35	14	12	8	16	11

Infant death-rate for the last 5 years:

Comparative Infant Death-rate.

1896	186·94 per 1000 births	
1897	140·70	„ „
1898	152·54	„ „
1899	140·77	„ „
1900	204·4	„ „

An increase on 1899 of 63·63

Detailed causes of Infant mortality.

Premature-birth and debility from birth	20

The age of half this number varied from 10 minutes to 24 hours; the other half from 2 to 15 days.

Detailed causes of Infant Mortality.

Whooping-Cough	1
Marasmus	4
Meningitis	4
Pneumonia	14
Bronchitis	8
Broncho-Pneumonia	4
Diarrhœa	10
Enteritis	3
Convulsions	4
Influenza	1
Dentition	3
Thrush	1
Hyperpyrexia	1
Heart Disease	1
Laryngismus Stridulus	1
Jaundice	1
Laryngitis	1

Of the 401 births registered 13 were illegitimate. Of these last 5 died before attaining to the age of one year; that is 34·8 per 100 of the illegitimates die against 19·8 of the legitimates. The illegitimates, poor strays of humanity, are invariably bereft of a mother's care. The mother has to go out for a living and the baby is left with a friend or some one who takes care of it for payment.

Influenza causing high Infant Mortality.

The very large increase of infant mortality for 1900 deserves our most serious consideration. A close examination of the figures reveals several interesting points. During the first quarter of the year we have the highest infant death-rate, viz., 28. This period coincides with the influenza epidemic which raged with great severity during the month of January and part of February. Although we have but one infant death certified as directly due to influenza, there can be no doubt that the incidence of the disease fell largely on this part of the population, and many cases certified as due to Bronchitis and Pneumonia were simply sequelae to the influenza attacks. Of the 26 deaths registered from Bronchitis, Pneumonia, and Broncho-Pneumonia in 1900 (as compared with 9 in 1899) 14 occurred in the first quarter, 2 in the third quarter, and 10 in the fourth quarter of the year. Although Influenza may thus be rightly described as the exciting cause, yet other considerations are contributary, and should not be overlooked. Many of the

Other causes.

jerry-built houses of the working classes are simply death traps, with badly constructed windows,and equally badly fitting doors, smoky chimneys, aerial currents driven through the rooms during winter storms with a velocity of 10 to 20 miles an hour, with no screens nor curtains to break the force of the currents. Add to this the well-known carelessness of many mothers in exposing their young ones, often standing with them at street corners in biting cold weather, during early convalescence from influenza and other complaints. Under such circumstances relapses are common, and the poor things exhausted by the first attack and indifferent nursing have no staying power and soon yield.

The next highest item in our infant mortality bill is premature-birth and debility from birth, which accounts for 20. Ten of these lived only from 10 minutes to 24 hours; the other 10 from 2 to 15 days. It is questionable indeed if under the most favorable conditions any of the first 10 could have survived. Premature-birth and debility from birth make up a fourth of our total infant deaths. Clearly such cases are not due to infant disease, properly so called, but to congenital conditions. So large a proportion point to the unsatisfactory condition of the parents. Thus we find young people marrying long before they come to marriageable age,producing off-spring stinted and undeveloped. Unsettled occupations, mothers engaged in daily toil, and other environments inimical to a state of motherhood tend to expel the fœtus before it comes to full maturity. Again, mothers of large families, with small houses and straightened circumstances, with untold cares and anxieties predispose to premature birth and debility in the off-spring. Often one witnesses when the 8th, 9th, or 10th

infant arrives the parents concern as to how it is to be reared. Nor should we be surprised if we discern in their faces an expression of satisfaction when they are told the little thing is not likely to live.

An improvement in this direction can only be looked for by the spread of education, self-restraint deferring the marriageable age, habits of strict economy and temperance which will promote the general comfort; sanitary improvement in houses, streets, and yards; early instruction during school life in the principles of domestic economy, cookery and nursing. In this direction it ought to be recorded that the labours of the local district nurse are of immense service.

A further study of our infant death-rate reveals a great difference in the Wards, the East Ward showing 44, against 23 in the West, and 15 in the South Ward. Considering that all our street and yard improvements take place in the East and West Wards this is remarkable. The South Ward has a population reckoned by the number of inhabited houses as large as the East and larger than the West Ward. However, in examining the figures in detail we find that this improvement holds good mainly under one head, e.g., Premature-birth. Whereas in the East Ward 10 premature births were registered and 9 in the West, in the South we have only 1. Special enquiries made in the South Ward point, I think, to less stringency exercised in classifying the still-borns from the premature births more than to any other factor to which we could naturally ascribe this discrepancy.

Still the East Ward has always had a bad reputation in this direction. The explanation is that East Kirkby approaches more and more the conditions of town life, with its density of population, slums, small rooms, low rents, where the casual labourer, the unemployed, the vicious, and intemperate congregate. Amongst such infant mortality is always high.

Diarrhœa.

The next item of importance in the Infant mortality list is Diarrhœa, and considering the severity of the epidemic we have had, extending over the months of July, August, September, and October, it is highly satisfactory to find that only 10 succumbed.

The three cases entered as enteritis occurred early in the year, and I have reason to believe that they were enteritis pure and simple.

Comparing the total number of deaths, this year 190, with last year 159, we find an increase of 31 ; 24 of which died before reaching the age of 1 year, and leaving only 7 for the increase above 1 year, which is not more than the increase of population naturally leads to.

Clearly then our increased death-rate is entirely due to infant mortality under the two headings of "Pneumonia, Bronchitis &c.," and "Premature-birth and Debility from Birth."

Notifiable Zymotic Diseases.

Notifiable Zymotic Diseases occurring in each Ward:—

	East Ward	West Ward	South Ward
Scarlet Fever	10	3	10
Diphtheria	1	8	...
Membranous Croup...	...	...	...
Typhoid Fever ...	4	9	5
Typhus Fever ...	...	...	...
Puerperal Fever ...	...	...	...
Erysipelas	4	4	7
Totals 1900 ...	19	24	22
Totals 1899 ...	88	101	34
Totals 1898 ...	58	23	27
Totals 1897 ...	39	21	24

Deaths from Zymotic Diseases.

Deaths from Zymotic Diseases occurring in each Ward:—

	East Ward	West Ward	South Ward
Scarlet Fever	1	...	1
Diphtheria	...	1	...
Typhoid or Enteric ...	...	...	...
Typhus Fever... ...	...	...	...
Puerperal Fever ...	1	...	...
Measles	..	...	...
Whooping-Cough ...	2	1	...
Diarrhœa-Enteritis ...	5	1	4
Erysipelas	...	...	...
Totals 1900 ...	9	3	5
Totals 1899 ...	10	15	8
Totals 1898 ...	13	4	13
Totals 1897 ...	7	4	7

Notifiable Zymotic Diseases occurring in each month:—

Zymotic Diseases occurring in each Month.

	Scarlet Fever	Diphtheria	Membranous Croup	Typhoid Fever	Typhus Fever	Erysipelas	Puerperal Fever
January	5	...	...	...	...	2	...
February	1	2	...	...	...	4	...
March	4	...	...	...	...	2	...
April	3	1	...	1	...	1	...
May	4	3	...	2	...	1	...
June	...	...	...	1	...	...	...
July	...	...	...	1	...	...	...
August	...	1	...	...	...	..	...
September	1	1	...	4	...	2	...
October	...	...	...	6	...	2	...
November	2	..	...	2	...	...	...
December	3	1	...	1	...	1	...
Totals 1900... ...	23	9	...	18	...	15	...
Totals 1899... ...	163	19	1	22	...	13	5
Totals 1893... ...	65	5	1	23	...	14	...
Totals 1897... ...	27	2	6	37	1	11	...

Deaths from Zymotic Diseases occurring in each month :—

Monthly Zymotic Deaths

	Scarlet Fever	Diphtheria	Membranous Croup	Typhoid Fever	Typhus Fever	Erysipelas	Puerperal Fever	Whooping Cough	Diarrhœa	Measles
January ...	...	...	...	...	...	...	1	...	...	...
February ...	...	...	...	...	...	...	...	...	...	...
March ...	...	...	...	...	...	...	...	...	...	...
April	1	...	...	...	...	...	...	2	...	...
May	...	...	...	...	...	...	...	...	...	...
June	...	...	...	...	...	...	...	...	...	...
July	...	...	...	...	...	...	...	...	...	...
August ...	...	...	...	...	...	...	...	...	2	...
September ...	...	...	...	...	...	...	...	1	6	...
October ...	...	1	...	...	...	...	...	...	2	...
November ...	...	...	...	...	...	...	...	...	...	...
December ...	1	...	...	...	...	...	...	...	...	...
Totals 1900 ...	2	1	...	..	...	...	1	3	10	...
Totals 1899 ...	5	3	...	4	...	...	2	1	12	6
Totals 1898 ...	3	...	...	3	...	1	...	4	15	4
Totals 1897 ...	1	1	...	4	1	...	...	5	6	...

Zymotic Death-rate :

1896	3·47 per 1000	Not including Diarrhoea & Dysentery
1897	1·39 „	
1898	1·72 „	
1899	2·31 „	
1900	0·75 „	

Deaths from other than Zymotic Diseases occurring monthly in each Ward :—

	East Ward	West Ward	South Ward
January	8	13	6
February	8	7	2
March	12	6	4
April	7	4	3
May	3	1	2
June	4	5	3
July	2	5	1
August	9	3	—
September	5	4	3
October...	10	5	4
November	7	4	1
December	5	4	3
Totals 1900 ...	80	61	32
Totals 1899 ...	52	44	37
Totals 1898 ...	43	31	36
Totals 1897 ...	52	21	38

Four inquests were held within the district:

Injuries, Accidents, and Suicides.

Verdicts: (1) "Accidentally killed."
(2) "Accidentally drowned."
(3) "Suicide during unsound mind."
(4) ditto.

Besides these, three others belonging to this parish committed suicide by drowning in the neighbouring parish, where the inquests were held.

Enteric or Typhoid Fever.

It is very satisfactory to record that Enteric Fever, almost endemic in this parish, and so prevalent throughout the Kingdom during 1900, is on the decrease. 18 cases were reported (with no deaths) as against 22 in 1899, 23 in 1898, and 37 in 1897; distributed in Wards as follows: 4 in the East Ward, 9 in the West Ward, and 5 in the South Ward. As may be observed from the following extracts from my journal made on my first visit when these cases were notified all except one were due to insanitary surroundings, chiefly the old-fashioned midden privy.

Taking the East Ward first, with 4 cases.

Case I in Low Moor Road:
"Very dirty ashpit and privy, fowls feeding in ashpit and closet and then walking in the yard."

Case II in Low Moor Road:
"Fall pipes from roof direct into sewer untrapped, with all the joints loose; a large water cistern in yard with an untrapped overflow into sewer."

Case III in Prospect Street:
"Unbricked yard, pail closet."

Case IV in Prospect Street:
Midden privy irregularly emptied, water stand in the yard over an untrapped gully."

West Ward, 9 cases.

Case I at Bentinck:
"Ashpit and midden privy irregularly emptied."

Case II at The Hill:
"Ashpit and midden privy irregularly emptied."

Case III at Lindley's Lane:
"Contracted whilst in service in Nottingham."

Case IV at Park Street:
"A railway surfaceman; probably contracted by drinking foul water on the line; house drainage very defective."

Case V at Chapel Street:
"Ashpit and privy regularly emptied, water stand in yard over untrapped gully which patient was in habit of removing and cleansing."

Case VI at Harris Yard:
"Dirty midden closets, in a dilapidated condition."

Case VII at Vernon Road:
"Pail closets, night soil from same and pig styes allowed to accumulate for a long time in front of the outhouses."

Case VIII at Lime Street:
"Pail closet, defective house drainage and cesspool in the yard, with an old quarry behind the house containing a large quantity of stagnant water, foul and dirty."

Case IX at Station Street:
"Pail closet, yard dirty, manure from pig styes allowed to accumulate for long periods in front of closet."

South Ward 5 cases.

Case I at Fisher Street:
"Privy closet irregularly emptied; house and yard otherwise very clean."

Case II at Wesley Street:
"Privy closet in damp yard."

Case III at Portland Row:
"Pail closet, ashpit not regularly emptied; drainage for house waste not attended to."

Case IV at Reform Street:
"Ashpit and privy not regularly emptied; otherwise premises in very good condition."

Case V at Bird's Lane:
"Privy closet dirty; large ashpits irregularly emptied."

It will be seen that 10 of these cases occurred in houses with midden privies; 7 in houses with pail closets; and one case imported. In two houses the water supply was obtained from stands in the yard over loose untrapped gullies. While in another house sewer air freely escaped into the kitchen through the loose joints of the fall pipe which passed into the sewer untrapped. With the exception of two all the back yards were unbricked, and the plots of land reserved behind for gardens, uncultivated, damp, and dirty, where too often the soil from the pig-styes and fowls is allowed to accumulate. If we are to escape from Typhoid Fever back yards must be bricked, plots of land for gardens cultivated, fowls and pigs kept under the most stringent regulations. Water stands, if outside at all, must be removed from gullies either trapped or untrapped. Whilst we suffer in our midst midden privies and ashpits they must be regularly emptied, and that can be done now that the Council has its own staff and horses. I would specially draw your attention to the gravel hole in Lime Street full of foul stagnant water, saturating the surrounding subsoil, and certainly injurious to those who live in the near neighbourhood. The remedy is to drain it, which can be easily done.

Diphtheria.

9 cases of Diphtheria were notified with one death, 8 in the West Ward and 1 in the East Ward, as against 19 in 1899, 15 in the West Ward, 3 in the East Ward, and 1 in the South Ward; there is thus a decrease of over 50 per cent. on last year. Notwithstanding this decrease it will be seen that Diphtheria clings to the West Ward. The great difference between this Ward and the other

Wards is the absence of sewers, the houses being only provided with cesspools, often not very far from the kitchen door. Into this receptacle house waste, bedroom slops, and all other forms of liquid filth were indiscriminately conveyed. During rain storms these cesspools quickly overflowed,regurgitated towards the kitchen doors and flooded the yards ; on such occasions the smell was always unbearable, and also on their being emptied. Rain storm periods with flooded yards, etc., were invariably followed by a crop of septic sore throats, some of which always developed into true Diphtheria.

Now that our sewerage system is completed, cesspools abolished, and proper house connections formed, it is to be hoped that the West Ward will experience the same exemption from frequent cases of Diphtheria as the East and South Wards.

Old habits die hard, and one would fain escape from the charge of repetition, but it is only by this constant repetition that we can ever expect to gain the consent of unwilling minds, so I would again draw the Council's attention to the Local Government Board's regulation, viz., to disconnect the roof-water pipes from the sewers and discharge them over trapped grated gullies in the open. Not only do these fall-pipes, when joined directly to the sewer, emit effluvia at the top, which enter the bedrooms, especially in summer, but as a rule all the joints are quite loose and sewer gases escape at the first joint, entering freely both by window and door into the kitchen where the inmates live, cook, and pass most of their time.

Scarlatina.

Isolated cases of Scarlatina were present in the district during the months of January, February, March, April, May, September, November, and December, with a total of 23, against 163 last year, and 2 deaths against 5 in 1899. As described in last year's report Scarlatina was epidemic in the district during the whole year, but by careful isolation in the homes and more particularly by extending the period of school exclusion we succeeded in stamping out the epidemic by the end of May, 1900. However, in a district like ours with its floating population there are sure to be now and then imported cases. During June, July, and August the district was perfectly free. In September only one case was notified, which was contracted in the city of Nottingham. The few cases notified in November and December correspond, I find, with the Kirkby Wakes and the Xmas holidays, when many friends and visitors from outside come to Kirkby, and in two cases I ascertained that their visiting friends came from infected homes. Visiting and personal intercourse are always strong factors in the spread of this complaint, and parents can never be told too often the care they ought to exercise in their social relations, in avoiding houses where Scarlatina exists.

The vicious idea prevails among people, who ought to know better, that Scarlatina and other infectious diseases are visitations of Providence,to which they must submit with the same complacency as they do to changes in the weather. An inveterate attitude of mind like this handed down from generation to generation is not easily changed, and a difficult task it is to

convince them, that infection is due to a living germ, which cannot grow of itself, but is carried to them from some previous existing case. Further when the house is tidy and clean, the surrounding yard bricked, the privies clean and sweet, the risk of catching infection is greatly diminished. Although dirt does not of itself originate infectious disease, it is the great carrier of it, so that one finds infectious diseases such as Scarlatina, Typhoid Fever, and Diptheria following in the trail of people known to be careless and dirty in their habits.

Puerperal Fever.

No case of Puerperal Fever was notified in the district during 1900. The death from Puerperal Fever registered during January of this year was notified in December of last year.

Erysipelas.

15 cases of Erysipelas were notified, as against 13 in 1899, 14 in 1898, 11 in 1897. In every instance the disease was of a trifling nature, not even preventing the patients from following their employment.

Whooping Cough.

Whooping-Cough in scattered cases has been prevalent during the year, and accounts for 3 deaths. The majority of cases being very mild, and at no time did the complaint interfere much with school atlendance.

Whooping-Cough not being a notifiable disease, hence the difficulty in ascertaining the exact number of individuals attacked. In all likelihood this complaint along with Influenza contributed to the increased Infant death-rate, from Bronchitis and Pneumonia, especially in the early part of the year.

Measles.

The district has been free from Measles up to the month of July, when a few imported cases quickly developed into an epidemic in the East and West Wards. Fortunately the public elementary schools were about to close for the summer holidays. Thus the closing of the schools occurring almost simultaneously with the outbreak of the epidemic greatly helped to arrest its progress. But as the holiday period only lasted three weeks, and with so many children recently convalescent from Measles who were sure to be sent to school, and believing that their mixing with the healthy children too soon would cause a renewal of the epidemic I advised the Sanitary Committee to notify the School Board to further prolong the holidays for a fortnight, which was accordingly done, and had the desired effect.

Phthisis.

12 deaths were registered from Phthisis, exactly the same number as last year. They were all typical cases of Pulmonary Tuberculosis, "consumption." When the owners of the houses agreed the bedroom occupied by the diseased was disinfected by the Sanitary Authority. It must be confessed that some people declined this very necessary precaution. Let me again repeat what was said last year, that is that by the very highest medical authorities consumption or phthisis is looked upon as a highly infectious disease. The evidence of its heredity is losing ground year by year, whereas on the other hand its infectious nature is becoming more and more apparent. I have on record a recent case which goes to show the very infectious nature of phthisis apart altogether from hereditary considerations. A woman with two families—one by a first and another by a second husband—took into her house a friend of her second husband who was in an advanced stage of consumption. I warned the people of the danger they were incurring and advised them to practice isolation and

disinfect the sputa, but this was disregarded. It was argued that they were free from consumption on both sides and that the phthisical patient was not a blood relation. In two or three months the consumptive patient died of advanced phthisis, within 6 months from her death two other members of the family died from phthisis, one of these last was by the first husband, and therefore no relation of the other two.

As described at length in my Report last year, milk from from tubercular cows is very largely responsible for much of our consumption, especially amongst infants.

The Sanitary Authority under the various Local Government Board Orders has the power of supervising and guarding our milk supply, not only so, but it is their duty to make regulations as to the proper ventilation, cubic space, water suppiy, and drainage of every cow-shed within their area. So also they are required to see to the health and good condition of the cattle, the cleanliness of the milk vessels, and to take every precaution possible to protect the milk supply of their district from contamination.

Many people here who are in no sense farmers keep one or two cows and sell their milk. It thus happens that we have quite a number of milk vendors.

The verdict of the Royal Commission on Tuberculosis is that the largest part of tuberculous matter which man obtains through his food is by means of milk, and that no one, especially young Infants, should take any milk until it is sterilized by boiling, and that too immediately before use.

Again patients suffering from active or advanced consumption should sleep in a bedroom by themselves, should expectorate in a vessel containing Condy's Fluid or a solution of carbolic acid and water—1 in 40—or some other eqnally strong disinfectant. Further, carry with them handkerchiefs specially made for this purpose, which when used should be burned forthwith. We must remember that the expectoration of the Phthisical is loaded with the germs of the disease, and when deposited in living rooms, bedrooms, and even public halls and conveyances these germs soon dry up and mix with particles of dust which float in the air and find their way into the air we breathe, the food we eat, and the water we drink. Hence it has been truly said "that no precaution or expense is too great which will save the race from this its greatest scourge."

Influenza.

As already mentioned a severe epidemic of Influenza passed over the district during the last half of December, 1899, and January and February, 1900. Although only 3 deaths were registered as primarily due to this complaint there can be little doubt that the epidemic largely influenced the death-rate for the first quarter of the year.

New Water Supply.

We are still deriving our water supply from the Sutton Urban Council's Water Works, but our own new waterworks are practically completed. As to the exceptional quality of the new supply, its geological source, chemical composition, and fitness for all domestic purposes, see pages 19-20 of last year's Report.

New Sewerage Scheme.

The most important and far-reaching Sanitary Improvement of the year has been the completion of our new sewerage scheme. Hitherto the only parts of the district sewered were East Kirkby and a portion of Annesley Woodhouse. In 1897

a Local Government Board Inquiry was held into the Council's application for a loan of £7,795 for the purpose of sewerage and sewage disposal. This is the scheme now completed. The installation is on a piece of land about 9 acres, of loamy soil and stiff clay bottom, situated in the extreme west end of the parish and forming along its full length the northern bank of the Erewash rivulet. The sewage of the district is conveyed here by means of three main tracks (1) from the Park district forming a junction with the East Kirkby main opposite the site of the Old Sewage Farm, and passing thence down the Erewash Valley, (2) from Mutton Hill, Nuncargate, and part of Annesley Woodhouse along Mill Lane forming a junction with the East Kirkby and Park main at Fryer's Mill, and thence passing in front of the Bentinck Colliery to the Sewage Farm, where again another junction is formed with the (3) main from Kirkby Town and Church Hill.

The crude sewage after passing through the screens is chemically treated in 7 precipitation tanks. The sludge formed is automatically discharged into sludge beds, the supernatant fluid conveyed by means of fixed carriers to several large contact beds and thence in irrigation channels over the land and finally discharged into the Erewash river. The process, as will be seen, is partly chemical and partly bacteriological. As I am writing the works are being taken over by the Council from the contractor.

Too soon to form an opinion.

Clearly at this juncture it would be premature to form an estimate of its efficiency. Should, however, chemical precipitation prove unsatisfactory, as probably it will do, we are nevertheless very favourably situated to replace the same by Bacteria beds.

Portland Row Sewerage.

Another small sewerage scheme for the village of Portland Row has been completed. It consists of a septic tank and 3 primary and 3 secondary contact beds enclosed within an acre of land. The plant which is designed to deal with the sewage from 47 houses is substantial and workmanlike in appearance. The beds are lined with Staffordshire blue bricks and bottomed with cement, and then filled to the depth of 3ft. 6in. with metal and burnt ballast. The place is a model of neatness and cleanliness, and with proper attention I am satisfied it will prove a great success. The effluent is limpid and clear, and there being no chemicals there is no sludge.

Todd's Row Sewerage.

The sewage from Todd's Row is being dealt with by irrigation over land in a satisfactory manner. So also is part of the sewage from Annesley Woodhouse treated by irrigation on a piece of land rented from J. P. Musters, Esq., of Annesley Hall.

A few houses in Kirkby Town and Annesley Woodhouse not provided for in our now completed sewerage scheme are shortly to be taken in hand by the Council.

House Connections to the New Sewer.

A further improvement of great importance following the opening of our Sewage Farm has been the joining of all the houses in the West Ward hitherto provided with cesspools to the new main. The readiness with which owners made these connections is highly commendable. The reform has given quite a new appearance to that part of the district, and let us also hope improved health. As remarked in my previous

Street Improvement a crying need.

Reports the pressing need of the various villages and hamlets comprising this district is street improvement, and although much remains to be done in this direction no year has been more fruitful than 1900. Prospect Street in the East Ward, and Harcourt Street, Foster Street, Vernon Road, Hampton Street and Park Street in the West Ward have all been dealt with under the Private Street Improvement Act.

Streets Impassable.

There still remain in East Kirkby and Annesley Woodhouse several streets little better than quagmires impassable for both vehicle and pedestrian. Let me also remind the Council that nothing has been done to carry out the recommendations of the special committee appointed in 1897 to report on the insanitary condition of Todd's Row. (See Report 1898, p 16.)

Public Elementary Schools, etc.

Public Elementary Schools, Lavatories, Closets, and all Private Bakehouses, and Slaughterhouses were regularly inspected every quarter by the Medical Officer of Health. In Kirkby a fine new elementary school has been completed, with accommodation provided for over 400 scholars. The building is arranged on the Central Hall principle with class-rooms radiating therefrom. The central hall is spacious and lofty,

New School.

55ft. by 25ft, with an elevation of 26ft., well heated, lighted, and ventilated. The out-offices are also a great improvement on the old midden vaults. The subsoil drainage and connections are carefully arranged with proper spoutings and trapped gullies.

Scavenging.

The scavenging of the district is partly done by contract and partly by the Council's own staff. Occasionally there are complaints of delay in emptying ashpits. It is well known that scavenging by contract has many defects, e.g., when the contractor is busy with other matters the removal of house refuse and night soil is sometimes seriously delayed, so much so that overflowing large ashpits and midden privies become a nuisance and menace to the health of the occupiers. Now that the Council has its own staff and horses it is greatly to be desired that scavenging by contract should cease.

Sewer Ventilators.

The new sewerage mains are, as may be seen, provided with flushers and ventilating shafts at suitable elevated positions. I have often drawn the Council's attention to the absence of proper means of ventilation and flushing for East Kirkby and Annesley Woodhouse sewers. In Ellis Street and Prospect Street—streets recently improved—new ventilators are provided for the sewers, and the flushing tank in Prospect Street put in a proper state of repair. If we are to reap full benefit from our sewers they must be ventilated and flushed.

Isolation Hospital,

The question of a combined Isolation Hospital for the districts of Kirkby, Sutton, Skegby, and Hucknall Huthwaite is now under the consideration of a joint-committee of those Authorities, which at its last meeting passed a resolution asking for a Local Government Board Inquiry.

It is to be hoped that this scheme will end in success. The suitableness of joining with the Sutton Sanitary Authority for an Isolation Hospital has always been present to my mind, and annually brought under your notice.

A question that has recently excited considerable concern here, in common with other parts of the Kingdom, has been poisoning from arsenic through beer drinking. From careful inquiries made I have reason to believe that there is no cause for alarm. Arsenic Poisoning through Beer Drinking,

The Council's New Bye-Laws are now ready signed and approved by the Local Government Board, and let us sincerely hope will be found helpful in many directions, particularly in reference to house building and drainage, yard improvement, the abatement of nuisances, the proper conditions under which pig styes, stables, and cow sheds should be kept. New Bye-Laws

I have the honour to remain, Gentlemen,

Your obedient Servant,

J. MACKENZIE.

Summary of Sanitary Work done in the Inspector of Nuisance's Department during the year 1900:—

	Inspections made	Informal Notices served by Inspector	Legal Notices by Authority	Nuisances abated after Notice
Defective Drainage of Land	1	1	...	1
Dwellinghouses:—				
Overcrowding ...	3	3	...	3
Ashpits and Privies	21	21	4	21
Deposits of Refuse Manure	4	4	1	4
House Drainage:—				
Defective Traps and no Connections ...	28	28	7	28
Water Supply ...	...	...	...	...
Offensive Trades ...	...	...	...	...
Other Nuisances ...	23	23	...	23

The foregoing cases were submitted to the Council monthly as follows:—

January	February	March	April	May	June
2	1	2	15	8	17
July	**August**	**September**	**October**	**November**	**December**
5	6	4	0	10	10

Houses disinfected after Infectious Disease 65

Schools disinfected before re-opening after Infectious Disease 3

TABLE I.

For whole District.

Year	Population estimated to middle of each year	Births		Deaths under 1 year of age		Deaths at all ages. Total		Deaths in Public Institutions	Deaths of non-residents registered in district	Deaths of residents registered beyond district	Deaths at all ages. Nett	
		Number	Rate	Number	Rate per 1000 births registered	Number	Rate				Number	Rate
1	2	3	4	5	6	7	8	9	10	11	12	13
1896	8226	241	39·07	39	161·82	93	15·0	...	2	3	94	15·0
1897	8595	398	46·40	56	140·70	129	15·0	...	1	1	129	15·04
1898	8809	354	40·18	54	152·54	140	15·8	...	2	1	139	15·8
1899	9062	412	45.4	58	140·77	159	17·5	...	2	1	158	17·5
Averages for years 1896-1899	8673	351·1	42·76	31·75	148·95	130·2	15·83	...	1·5	1·5	130·0	15·83
1900	9410	401	42·6	82	204·4	190	20·1	...	2	2	190	20·1

Area of District in acreas (exclusive of area covered by water) ... 5590
Total population at all ages 6533
Number of inhabited houses 1257
Average number of persons per house... ... ... 5·19

All census of 1891.

TABLE II.

Year	Kirkby-in-Ashfield Urban District				East Ward			West Ward			South Ward		
	Population estimated to middle of each year	Births registered	Deaths at all ages	Deaths under 1 year	Births registered	Deaths from all ages	Deaths under 1 year	Births registered	Deaths at all ages	Deaths under 1 year	Births registered	Deaths at all ages	Deaths under 1 year
1896	8226	241	93	39	120	41	19	60	26	10	61	26	10
1897	8595	398	129	56	178	58	21	79	24	7	141	47	28
1898	8809	354	140	54	157	56	29	91	35	8	106	49	17
1899	9062	412	159	58	180	58	23	108	56	21	124	45	14
Averages for years 1896-1899	8673	374·6	138·9	55·2	169·3	56·8	24·5	90·1	37·6	12·2	115·2	44·5	18·4
1900	9410	401	190	88	181	88	44	117	66	23	113	36	15

TABLE IIA.—FOR COMPARISON.

Showing the number of Deaths at different ages from various Causes.

Kirkby-in-Ashfield Urban District.	Registered Births	DEATHS							CAUSES																						
		All ages	Under 1 year	1 and under 5	5 and under 15	15 and under 25	25 and under 65	Over 65	Scarlatina	Diphtheria	Enteric or Typhoid	Whooping Cough	Puerperal Fever	Measles	Zymotic Death Rate	Influenza	Diarrhœa	Enteritis	Other septic diseases	Phthisis	Other forms of tubercular disease	Cancer, malignant disease	Bronchitis, Pneumonia, &c.	Alcholism—Cirrhosis of Liver	Premature Birth	Debility from Birth	Heart Disease	Rheumatic Fever	Accidents	Suicides	All other causes
East Ward ...	181	88	44	7	3	6	16	12	1	...	...	2	1	...	...	3	5	3	...	7	6	2	14	1	7	3	5	1	1	1	28
West Ward ...	107	66	23	8	8	1	16	10	...	1	...	1	...	...	...	...	1	2	1	3	4	1	14	1	6	3	4	2	1	1	16
South Ward ...	113	36	15	6	3	1	4	7	1	...	...	...	...	...	...	1	4	2	1	2	4	1	11	...	1	...	2	1	...	...	6
Totals.....	401	190	82	21	14	8	36	29	2	1	...	3	1	...	...	4	10	7	2	12	14	4	39	2	14	6	11	4	2	2	50
Rate per 1000 of the population...	42·6	20·1	204·0 per 1000 births	2·23	1·48	·85	3·82	3·08	.21	.1	...	·31	.1	...	·75	·42	1·0	.75	·21	1·2	1·4	.42	4·1	·21	1·4	·63	1·1	·42	·21	·21	5·31
Administrative County of Nottingham 1899 ...	30·7	16·2	161·0						·16	·1	·52	·13		·52	2·01		·86			·98			·54				1·37	.07	·37		8·47
England & Wales 1900		18·3	154·0						·12	·29	·17	·34		·39	2·00		·69														

TABLE III.

Cases of Infectious Disease notified during the Year 1900.

Notifiable Diseases	Cases notified in whole District.						Total cases notified in each locality.		
	At all ages	1 to 5	5 to 15	15 to 25	25 to 65	65 & upwards	East Ward	West Ward	South Ward
Diphtheria	9	2	4	1	2	...	1	8	...
Erysipelas...	15	1	1	1	11	1	4	4	17
Scarlet fever	23	14	4	3	2	...	10	3	10
Enteric fever	18	1	5	6	6	...	4	9	5
Totals...	65	18	14	11	21	1	19	24	32

TABLE IV.

Causes of, and Ages at, Death during Year 1900.

Causes of Death	Deaths in whole District at subjoined ages.							Deaths in localities (at all ages)		
	All ages	Under 1	1 & under 5	5 & under 15	15 & under 25	25 & under 65	65 & upwards	East Ward	West Ward	South Ward
Scarlet fever	2		1	1				1		1
Whooping-cough	3	1	2					2	1	
Diphtheria and membranous croup ...	1			1					1	
Epidemic influenza ...	4	1				1	2		3	1
Diarrhœa.....	10	10						5	1	4
Enteritis	7	3	3			1		3	2	2
Puerperal fever.....	1				1			1		
Other septic disease...	2					2			1	1
Phthisis	12		4		3	5		7	3	2
Other tubercular diseases	14	4	3	6	1			6	5	3
Cancer, malignant disease.....	4					3	1	2	1	1
Bronchitis	10	7				1	2	4	4	2
Pneumonia.....	29	19	5	1		3	1	10	10	9
Alcoholism Cirrhosis of liver.....	2					2		1	1	
Premature birth.....	14	14						7	6	1
Heart diseases	11	1		1		6	3	5	4	2
Accidents	2				1	1		1	1	
Suicides	2					2		1	1	
Debility from birth ...	6	6						3	3	
Rheumatic fever	4			1		2	1	1	2	1
Other causes	50	16	3	3	2	7	19	28	16	6
All causes	190	82	21	14	8	36	29	88	66	36